

5. Tribe MIMOSEAE

含羞草族 han xiu cao zu

Wu Delin (吴德邻 Wu Te-lin); Ivan C. Nielsen

Leaves bipinnate. Flowers bisexual, polygamous, or andromonoecious (then upper flowers perfect, lower staminate or sterile), numerous in heads, spikes, or racemes, sometimes aggregated into compound inflorescences. Sepals usually 5, valvate or imbricate. Petals as many as sepals, valvate (except *Dinizia*), free to joined. Stamens usually 5–10, exerted, free or ± connate at base, sometimes petaloid in sterile flowers; anthers generally dorsifixed, with or without an apical gland; pollen simple or compound. Ovary sessile to stipitate; ovules 2 to many. Legumes usually compressed, occasionally terete, torulose, spirally twisted, or tetragonal and rarely winged, often curved, indehiscent or dehiscent along one or both margins, sometimes with valves separating from a persistent margin (replum) and breaking into 1-seeded segments. Seeds compressed, sometimes winged, exarillate, usually with a pleurogram.

About 40 genera and 860–880 species: distributed in the tropics and subtropics, less often in temperate regions, most numerous in tropical South America and tropical Africa; seven genera (five introduced) and 12 species (eight introduced) in China.

Dichrostachys cinerea (Linnaeus) Wight & Arnott and *Prosopis juliflora* (Swartz) Candolle are introduced and cultivated in China. However, they are not treated here because they are uncommon and not known to be naturalized.

1a. Climbers or herbs.

2a. Woody climbers, or trailing or scandent shrubs; leaves with pinnae in 2 pairs, tendrils present; legume jointed 26. *Entada*

2b. Perennial herbs; leaves with pinnae in 4–10 pairs, without tendrils; legume not jointed 27. *Neptunia*

1b. Trees, shrubs, or subshrubs.

3a. Tall trees, 6–30 m tall.

4a. Pinnae with leaflets in 28–60 pairs; flowers in club-shaped pendulous head; legume basally attenuate into a long stipe 24. *Parkia*

4b. Pinnae with leaflets in 4–7 pairs; flowers in racemes or panicles; legume basally not attenuate into a long stipe 25. *Adenanthera*

3b. Small trees, shrubs, or subshrubs, 0.5–6 m tall.

5a. Armed plant; legume dehiscent in several segments separating from persistent sutures; leaflets sensitive 29. *Mimosa*

5b. Unarmed plant; legume not dehiscent in several segments separating from persistent sutures; leaflets not sensitive.

6a. Small trees or shrubs, 2–6 m tall; pinnae with leaflets in 5–15 pairs; legume broadly linear 28. *Leucaena*

6b. Subshrubs, up to 2 m tall; pinnae with leaflets in 6–21 pairs; legume linear 30. *Desmanthus*

24. PARKIA R. Brown in Denham & Clapperton, Narr. Travels Africa, 234. 1826.

球花豆属 qiu hua dou shu

Trees, unarmed. Leaves bipinnate, with numerous pinnae and leaflets. Inflorescences solitary and axillary, or several at apices of branches, large and clavate or depressed globose, pedunculate. Flowers very numerous. Fertile flowers (bisexual) at upper part of heads, yellow to red, lower sterile ones (male or neuter) white or red. Calyx cylindrical; teeth 5, very short and imbricate. Petals 5, linear-spatulate, free or connate to middle. Stamens 10, free or connate at base and adnate to corolla; anthers oblong, usually tipped by a gland. Ovary sessile or stipitate; ovules numerous; style filiform; stigma terminal. Petals of lower sterile flowers often free. Staminodes 10, in a long bundle, free distally, filiform. Legume straight or curved, oblong or elongate, compressed, rather woody or fleshy, 2-valved. Seeds transverse, ovoid, thick or compressed; pleurogram if present ± elliptic.

About 35 species: tropical regions of Africa, the Americas, and Asia; two species (both introduced) in China.

1a. Leaflets 5–10 × 1–2 mm, lateral veins inconspicuous 1. *P. timoriana*

1b. Leaflets 10–14 × 3–4.2 mm, lateral veins abaxially prominent 2. *P. leiophylla*

1. *Parkia timoriana* (Candolle) Merrill, Philipp. J. Sci., C, 5: 33. 1910.

球花豆 qiu hua dou

Inga timoriana Candolle, Prodr. 2: 442. 1825; *Parkia roxburghii* G. Don.

Trees, to 30 m tall. Branchlets brown. Leaf rachis more than 30 cm, glabrous or pubescent; petiolar gland elliptic to circular, 2–4 mm; pinnae 20–30(–42) pairs, pinna rachis 9–12

cm; leaflets 50–60 pairs, falcate or slightly sigmoid, linear, 5–10 × 1–2 mm, lateral veins inconspicuous, base truncate, apex acute. Heads 3–4 cm in diam.; peduncles pendent, 20–45 cm. Flowers small. Calyx tubular, ca. 6 mm. Corolla tubular, 10–11 mm, 5-lobed; lobes 1–1.5 mm, villous. Stamens 10; filaments exerted 2–3.5 mm beyond calyx, base adnate to collar. Ovary stipitate. Legume straight, strap-shaped, flat, 20–36 × 3–4.5 cm, glabrous, base attenuate into a stipe 6–15 cm. Seeds 13–21, black, ovoid, ca. 2 cm, hard. Fr. Feb–Apr.

Cultivated in Taiwan [native to tropical Asia].

2. *Parkia leiophylla* Kurz, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 42: 73. 1873.

大叶球花豆 da ye qiu hua dou

Trees, to 30 m tall. Branchlets brown, pubescent when young. Leaf rachis 30–60 cm; petiolar gland broadly elliptic, 4–6 mm; pinnae (11–)15–20 pairs, pinna rachis 10–15 cm, fulvous pubescent; leaflets sessile, 28–56 pairs, linear-falcate, 10–14 × 3–4.2 mm, rigidly leathery, both surfaces glabrous except ciliate along margin, lateral veins prominent abaxially, base subtrun-

cate, unilaterally slightly auriculate, apex obliquely acute. Heads with peduncles 30–45 cm, several together racemiform. Flowers yellow. Calyx 8–10 mm; lobes orbicular, yellow tomentose. Corolla tubular, 10.5–11.5 mm; lobes ca. 1.5 mm, oblong, acute. Staminal tube 9–9.5 mm; anthers 1–1.5 mm. Ovary stipitate. Legume black, slightly torulose, (15–)30–45 × ca. 3 cm, glabrous, shiny, base attenuate into a stipe 12–22 cm, apex rounded. Seeds obliquely arranged, 6–15. Fl. Mar, fr. Sep–Nov.

Dry evergreen and mixed deciduous forests, thickets, along brooks; 500–600 m. Cultivated in Yunnan (Xishuangbanna) [native to Myanmar and Thailand].

25. ADENANTHERA Linnaeus, Sp. Pl. 1: 384. 1753.

海红豆属 hai hong dou shu

Trees, unarmed. Leaves bipinnate, spirally arranged, without glands; stipules caducous, small; leaflets alternate, in many pairs, small. Inflorescence a raceme or panicle, axillary or terminal. Flowers white or yellowish, bisexual or polygamous, shortly pedicellate. Calyx campanulate, shortly 5-toothed. Petals 5, lanceolate, coherent below middle or soon free. Stamens 10, free, slightly longer than petals; anthers ovoid, with a deciduous gland at apex. Ovary sessile, many ovuled; style filiform. Legume straight, falcate, or slightly twisted, strap-shaped, leathery, septate between seeds, dehiscent along sutures when ripe. Seeds thick; testa scarlet or 2-colored, hard, with pleurogram, mostly enclosed by a thin pulp.

Twelve species: tropical Asia and the Pacific islands; one species in China.

1. *Adenanthera microsperma* Teijsmann & Binnendijk, Natuurk. Tijdschr. Ned.-Indië 27: 58. 1864.

海红豆 hai hong dou

Adenanthera microsperma var. *luteoseminalis* G. A. Fu & Y. K. Yang; *A. pavonina* Linnaeus var. *luteoseminalis* (G. A. Fu & Y. K. Yang) X. Y. Zhu; *A. pavonina* var. *microsperma* (Teijsmann & Binnendijk) I. C. Nielsen.

Trees, deciduous, 5–20 m tall. Branchlets puberulent. Petiole and rachis puberulent; pinnae 3–5 pairs; leaflets 4–7 pairs, with short petiolules, alternate, oblong or ovate, 2.5–3.5 × 1.5–2.5 cm, both surfaces puberulent, both ends rounded-obtuse. Racemes simple, axillary or arranged in panicles at apices of

branchlets, puberulent. Flowers white or yellow, small, fragrant, shortly pedicellate. Calyx less than 1 mm, together with pedicel golden yellow puberulent. Petals oblong, 2.5–3.5 mm, usually glabrous but occasionally puberulent toward apex, slightly connate at base. Stamens 3–4.5 mm; anthers ca. 0.5 mm. Ovary nearly sessile, villous; style filiform; stigma small. Legume narrowly oblong, 10–20 × 1.2–1.4 cm, valves contorted after dehiscence. Seeds scarlet or yellow, suborbicular to ellipsoidal, 5–8 × 4.5–7 mm. Fl. Apr–Jul, fr. Jul–Oct.

Valleys, along streams, forests, cultivated in gardens; sea level to 1000 m. Fujian, Guangdong, Guangxi, Guizhou, Hainan, Taiwan, Yunnan [Cambodia, Indonesia, Laos, Malaysia, Myanmar, Thailand, Vietnam].

26. ENTADA Adanson, Fam. Pl. 2: 318, 554. 1763, nom. cons.

榼藤属 ke teng shu

Climbers, woody, or scandent shrubs, large, usually unarmed. Leaves bipinnate; stipules small, setaceous; petiolar gland absent; terminal pair of pinnae sometimes transformed into a tendril; leaflets opposite, 1 to many pairs. Spikes axillary or supra-axillary, slender, solitary or arranged in a racemelike panicle. Flowers bisexual or polygamous, 5-merous, sessile. Calyx campanulate, shortly dentate. Petals free or slightly united at base. Stamens 10, shortly connate at base and adnate to petals, much exerted; anthers with a deciduous gland at apex; filaments filiform. Ovary subsessile; ovules numerous; style filiform; stigma minute. Legume straight or curved to spirally twisted, plano-compressed, large and long, leathery or woody; valves splitting transversely at maturity into 1-seeded segments; segments falling away from suture, which persists as an empty frame. Seeds globose to orbicular, large; testa brown, thick, without pleurogram (in Asia).

About 30 species: mainly in tropical Africa and the Americas; three species in China.

1a. Shrubs, trailing or scandent, with large fleshy tuber underground; leaflets 8–11 pairs per pinna,

1.1–1.9 × 0.4–0.8 cm 1. *E. parvifolia*

1b. Climbers, very large, without fleshy tuber; leaflets 1–5 pairs per pinna, 2.3–9 × 1.3–4.5 cm.

2a. Leaflets 1 or 2 pairs per pinna; legume with a parchmentlike endocarp 2. *E. phaseoloides*

2b. Leaflets 3 or 4(or 5) pairs per pinna; legume with a woody endocarp 3. *E. rheedii*

1. *Entada parvifolia* Merrill, Philipp. J. Sci., C, 3: 229. 1908.

小叶槭藤 xiao ye ke teng

Entada philippinensis Gagnepain.

Shrubs, scandent, with large, fleshy tuber underground. Stems terete, glabrous. Pinnae 2 pairs, 4.5–7.5 cm; leaflets 8–11 pairs per pinna, obliquely oblong, 1.1–1.9 cm × 4–8 mm, base half cuneate, half rounded, apex rounded to mucronulate or slightly emarginate. Spikes supra-axillary, ca. 15 cm. Flowers bisexual or male. Calyx cup-shaped, to 1 mm. Petals oblong-linear, ca. 3 mm, apex mucronate. Stamens 5.5–7 mm. Ovary ca. 1.5 mm, glabrous. Legume dark brown, oblong, ca. 30 × 5 cm; segments 2.3–3 cm, epicarp rigidly papery, endocarp thinly parchmentlike. Seeds dark brown, irregularly ovoid, ca. 1.8 × 1.6 cm. Fl. and fr. Aug–Nov.

Forests; 100–600 m. Taiwan (Hengchun Peninsula) [Japan (Ryukyu Islands), Philippines].

2. *Entada phaseoloides* (Linnaeus) Merrill, Philipp. J. Sci., C, 9: 86. 1914.

槭藤 ke teng

Lens phaseoloides Linnaeus, Herb. Amboin. 18. 1754; *Entada kosunensis* Hayata & Kanehira; *E. scandens* (Linnaeus) Benth; *Mimosa scandens* Linnaeus.

Climbers, evergreen, large, woody. Stems often spirally twisted. Branches glabrous. Leaves 10–25 cm; petiole short; pinnae usually 2 pairs; leaflets 1 or 2 pairs, apical pair of pinnae transformed into a tendril, elliptic or narrowly obovate, 3–9 × 1.5–4.5 cm, leathery, base slightly oblique, apex obtuse, emarginate. Spikes 15–25 cm, solitary or arranged in a panicle, villous; bracts pubescent. Flowers slightly fragrant. Calyx campanulate, ca. 2 mm, 5-toothed. Petals 5, green with reddish base, oblong, ca. 4 mm, glabrous, slightly united at base, apex acute.

Stamens white, slightly longer than corolla. Ovary glabrous; style filiform. Legume curved, flat, to 1 m × 8–12 cm, with a parchmentlike endocarp. Seeds dark brown, orbicular, flat, 4–6 cm in diam.; testa brown, brilliant, woody. Fl. Mar–Jun, fr. Aug–Nov. $2n = 28$.

Forests; 200–1300 m. Fujian, Guangdong, Guangxi, Hainan, Taiwan, Xizang, Yunnan [tropical and subtropical Asia; tropical Australia].

This plant is poisonous; it is used medicinally.

3. *Entada rheedii* Sprengel, Syst. Veg. 2: 325. 1825.

眼镜豆 yan jing dou

Mimosa entada Linnaeus, Sp. Pl. 1: 518. 1753; *Entada formosana* Kanehira; *E. laotica* Gagnepain; *E. monostachya* Candolle; *E. pursaetha* Candolle; *E. pursaetha* subsp. *sino-himalensis* Grierson & D. G. Long; *E. pursaetha* var. *sino-himalensis* (Grierson & D. G. Long) C. Chen & H. Sun.

Climbers, woody. Pinnae 2 pairs, 5–15 cm; leaflets 3 or 4 (or 5) pairs per pinna, opposite, obovate to elliptic-lanceolate, unequally sided, 2.3–7 × 1.3–3.5 cm, papery, abaxially glaucous, base rounded to broadly cuneate, apex acuminate to obtuse, or emarginate. Spikes solitary or fasciculate, axillary, 12–25 cm. Flowers male or bisexual. Calyx green, cup-shaped, 0.8–1 mm. Petals white, narrowly elliptic to lanceolate, 2.8–3 mm. Stamens white, turning yellow, 5–6.5 mm. Ovary glabrous. Legume straight to slightly curved, to 2 m × 7–15 cm; segments 6.5–7.5 cm, epicarp and endocarp woody. Seeds brown, brilliant, suborbicular, flat, 3.5–4 × ca. 1 cm. Fl. Mar–Apr, fr. Aug–Oct.

Forests; 100–900 m. Fujian, Guangdong, Hainan, Taiwan, Xizang, Yunnan [tropical Asia; E Africa, Australia, Indian Ocean islands (Mascarene Islands)].

The bark and seeds contain saponin, which is used as a substitute for soap.

27. NEPTUNIA Loureiro, Fl. Cochinch. 2: 641, 653. 1790.

假含羞草属 jia han xiu cao shu

Herbs, perennial, sometimes prostrate or floating, unarmed. Leaves bipinnate, sensitive to touch; stipules obliquely cordate, membranous; rachis with or without glands; pinnae not glandular; leaflets opposite, several to numerous pairs, small. Heads solitary, ovoid-globose, pedunculate, with bisexual flowers in distal part and sterile flowers with elongate staminodes at base. Calyx campanulate, shortly 5-dentate. Petals 5, free or fused at base. Stamens 10, rarely 5, free; anthers with or without a small gland at apex. Staminodes 10, petaloid and elongate in neuter flowers. Ovary stipitate; ovules numerous; style filiform; stigma concave. Legume deflexed from stipe, oblong, plano-compressed, subseptate between seeds or rarely 1-seeded. Seeds transverse, ovoid, compressed, funicle filiform.

Eleven species: tropical and subtropical regions, especially in Australia and the Americas; one species (introduced) in China.

1. *Neptunia plena* (Linnaeus) Benth, J. Bot. (Hooker) 4: 355. 1842.

假含羞草 jia han xiu cao

Mimosa plena Linnaeus, Sp. Pl. 1: 519. 1753.

Herbs, perennial, terrestrial or subaquatic. Stems erect or ascending, branched. Stipules persistent, lanceolate, ca. 1 cm, base obliquely cordate; pinnae 4–10 pairs, with a suppressed gland between or just below lowest pair of pinnae; leaflets 9–40

pairs per pinna, linear-oblong, 4–18 × 1.5–3 mm, both surfaces glabrous, base rounded, apex obtuse, acute, or mucronate. Heads ovoid, ca. 2 cm. Calyx campanulate, ca. 1.5 mm, 5-dentate. Petals lanceolate, ca. 3 mm, fused at base. Stamens 10; filaments ca. 6 mm, with stipitate gland at apex. Staminodes petal-like, 8–10 mm. Legume oblong, 5–10 × 1.6–2 cm. Seeds 5–20. Fl. Aug–Oct, fr. Oct–Nov.

Planted or occasionally escaped in wet places; sea level to 100 m. Fujian, Guangdong, Taiwan [native to tropical America].

28. LEUCAENA Benth, J. Bot. (Hooker) 4: 416. 1842, nom. cons.

银合欢属 yin he huan shu

Trees or shrubs, evergreen, unarmed. Leaves bipinnate; stipules deciduous, small, setaceous; petiole often glandular; leaflets opposite, numerous and small, or few and larger, oblique. Heads solitary or fasciculate, axillary, globose, pedunculate; bracts usually 2. Flowers sessile, usually bisexual. Calyx campanulate, 5-toothed. Petals 5, free or nearly so. Stamens 10, free, exserted; anthers apically eglandular. Ovary stipitate; ovules numerous; style filiform. Legume stipitate, broadly linear, plano-compressed, leathery, 2-valved, continuous within. Seeds transverse, ovoid, flat.

About 22 species: native to the Americas, one species introduced and naturalized in the Old World including China.

1. *Leucaena leucocephala* (Lamarck) de Wit, Taxon 10: 54. 1961.

银合欢 yin he huan

Mimosa leucocephala Lamarck, Encycl. 1: 12. 1783; *Acacia glauca* Willdenow (1806), not (Linnaeus) Moench (1794); *Leucaena glauca* Benth; *M. glauca* Linnaeus (1763), not Linnaeus (1753).

Shrubs or small trees, 2–6 m tall. Branchlets pubescent, glabrous when old, with brown lenticels. Stipules caducous, deltoid, very small; pinnae 4–8 pairs, 5–9(–16) cm, rachis pubescent with black glands at location of lowest pinnae; leaflets 5–15 pairs, linear-oblong, 7–13 × 1.5–3 mm, main vein close to upper margin, base cuneate, margin ciliate, apex acute. Heads

usually 1 or 2, axillary, 2–3 cm in diam.; peduncle 2–4 cm; bracts deciduous, pubescent. Flowers white. Calyx ca. 3 mm, outside glabrous at base, puberulent at apex, 5-toothed. Petals narrowly oblanceolate, ca. 5 mm, outside pubescent. Stamens 10, sparsely pubescent, ca. 7 mm. Ovary shortly stipitate, sparsely pubescent; stigma cupular. Legume straight, strap-shaped, flat, 10–18 × 1.4–2 cm, leathery, base attenuate, pedicel to 3 cm, pubescent, beak acute, hard. Seeds 6–25, brown, glossy, narrowly ovoid, flat, 6–9 × 3–4.5 mm. Fl. Apr–Jul, fr. Aug–Oct. $2n = 104^*$.

Cultivated and naturalized in Fujian, Guangdong, Guangxi, Guizhou, Hainan, Taiwan, Yunnan [originally from tropical America, widely distributed in tropical and subtropical regions].

This plant is grown for use as green manure and fodder.

29. MIMOSA Linnaeus, Sp. Pl. 1: 516. 1753.

含羞草属 han xiu cao shu

Shrubs or herbs, rarely trees or climbers, usually armed. Stipules not spinescent, usually 2 per pinna, small, caducous. Leaves bipinnate, often sensitive. Heads globose or spikes cylindric, solitary or fasciculate, axillary, pedunculate. Flowers small, bisexual or polygamous, sessile, usually 4-merous. Calyx connate, valvate, campanulate, toothed. Petals connate at base. Stamens 4 or 8, free, exserted; anthers without glands. Ovary many ovuled; style filiform. Legume oblong or linear, usually plano-compressed, membranous or leathery, composed of 1-seeded segments, separating from persistent margins. Seeds elliptic or orbicular, flat.

About 500 species: mostly in tropical America; three species (all introduced) in China.

- 1a. Pinnae 1 or 2 pairs 1. *M. pudica*
 1b. Pinnae 3–10 pairs.
 2a. Tall shrubs or trees; stems terete 2. *M. bimucronata*
 2b. Straggling woody shrubs or semiwoody herbs; stems angulate 3. *M. diplotricha*

1. *Mimosa pudica* Linnaeus, Sp. Pl. 1: 518. 1753.

含羞草 han xiu cao

Herbs, diffuse, shrubby, to 1 m tall. Stems cylindric, branched, with reflexed bristles and scattered, curved prickles. Stipules lanceolate, 5–10 mm, bristly; pinnae and leaflets sensitive; pinnae usually 2 pairs, digitate, 3–8 cm; leaflets 10–20 pairs, linear-lanceolate, 6–15 × 1.5–3 mm, abaxially slightly hispid, adaxially glabrous, margin ciliate, apex acute. Heads solitary or 2, axillary, globose, ca. 1 cm in diam.; peduncle long; bracts linear. Flowers numerous, pink, small. Calyx minute. Corolla campanulate; lobes outside pubescent. Stamens 4, exserted. Ovary shortly stipitate, glabrous; ovules 3 or 4; style filiform; stigma small. Legumes arranged in a star, slightly recurved, flat, oblong, 1–2 cm × ca. 5 mm, consisting of 3–5 1-seeded segments which fall away from persistent, bristly sutures. Seeds light brown, ovoid, ca. 3.5 mm. Fl. Mar–Oct, fr. May–Nov. $2n = 52^*$.

Wilderness tracts, wastelands, or cultivated; sea level to 1500 m. Fujian, Guangdong, Guangxi, Hainan, Jiangsu, Taiwan, Yunnan, Zhejiang [native to tropical America; naturalized in tropical regions of the world].

This plant is grown as an ornamental and used medicinally as a sedative and sleep aid.

2. *Mimosa bimucronata* (Candolle) O. Kuntze, Revis. Gen. Pl. 1: 198. 1891.

光荚含羞草 guang jia han xiu cao

Acacia bimucronata Candolle, Prodr. 2: 469. 1825; *Mimosa sepiaria* Benth.

Shrubs, deciduous, 3–6 m tall. Branchlets unarmed in distal parts, in lower parts armed by recurved prickles to 1 cm, densely yellow tomentose. Pinnae 4–9 pairs, 1.5–8 cm; rachis unarmed, pubescent; leaflets 12–16 pairs, linear, 5–7 × 1–1.5 mm, leathery, glabrous to puberulent with ciliate margin, main

vein near upper side, apex mucronate. Heads globose, forming a spreading panicle with compound, spreading lower branches. Flowers white, scented. Calyx cup-shaped, minute. Petals oblong, 2.5–4 mm, connate at base. Stamens 8; filaments 4–5 mm. Ovary initially glabrous. Legume brown, straight, strap-shaped, 3.5–4.5 × ca. 0.6 cm, unarmed, finely reticulate veined, usually with 4–8 segments. Seeds olivaceous, ovoid, compressed, ca. 4.5 mm. $2n = 26^*$.

Introduced in Guangdong, escaped in thin forests [native to South America (NE Argentina and E Brazil)].

3. *Mimosa diplotricha* C. Wright ex Sauvalle, *Anales Acad. Ci. Med. Habana* 5: 405. 1868.

巴西含羞草 *ba xi han xiu cao*

Subshrubs or perennial herbs. Stems scandent or prostrate, to 5 m, 4-angulate, hirsute, with or without prickles along angles. Leaves 10–15 cm; petiole and rachis with 4 rows of recurved prickles; pinnae (3–)7 or 10 pairs, 2–4.5 cm; leaflets (11–)20–30 pairs per pinna, linear-oblong, 3–5 × 1–2 mm, both surfaces white villous. Heads 1 or 2, axillary, ca. 1 cm in diam. (including filaments); peduncles 5–10 mm. Flowers bisexual. Calyx inconspicuous, ca. 0.4 mm. Corolla narrowly funnel-shaped, ca. 2.5 mm, 4-lobed, outside slightly pubescent. Stamens 8; filaments pale purple-pink. Ovary ca. 1 mm. Legumes in clusters, slightly curved, oblong, 1.5–3.5 × 0.4–0.5 cm, with or without prickly bristles. Seeds yellow-brown, ca. 3.5 mm. $2n = 26^*$.

30. *DESMANTHUS* Willdenow, Sp. Pl. 4: 888, 1044. 1806, nom. cons.

合欢草属 *he huan cao shu*

Acuan Medikus.

Subshrubs [or trees, shrubs, or perennial herbs]. Leaves bipinnate; stipules persistent, setaceous; pinnae [1–]2–6[–15] pairs; leaflets small; petiolar gland often between lower pair. Heads solitary, axillary, ovoid-globose. Flowers all bisexual, or lower male or neuter and sometimes without petals but with short staminodes. Calyx campanulate, shortly dentate. Petals free or nearly so. Stamens [5 or]10, free, exserted; anthers eglandular at apex. Ovary sessile; ovules numerous; style subulate or thickened distally; stigma terminal. Legume straight or falcate, linear, plano-compressed to terete, 2-valved, continuous within or subseptate between seeds. Seeds oriented lengthwise or oblique, ovoid to ellipsoidal, compressed.

About 24 species: mainly in tropical and subtropical regions of the Americas; one species (introduced) in China.

1. *Desmanthus pernambucanus* (Linnaeus) Thellung, *Mém. Soc. Sci. Nat. Math. Cherbourg*, sér. 4, 38: 256. 1912.

合欢草 *he huan cao*

Mimosa pernambucana Linnaeus, Sp. Pl. 1: 519. 1753.

Subshrubs, to 2 m tall. Stem glabrous or slightly puberulent, angulate. Stipules subulate; petiolar gland on lowest pair of pinnae; pinnae 2–6 pairs, 1.2–2.5 cm; leaflets 6–21 pairs per pinna, oblong, 4–6 × ca. 2 mm, ciliate along margin, slightly asymmetric, base truncate, apex acute. Heads axillary, ca. 5 mm in diam., 4–10-flowered; bracteoles ovate, caducous. Flowers

Cultivated or naturalized in Fujian, Guangdong, Hainan, Taiwan, and Yunnan [native to tropical America; introduced throughout the tropics].

This species is planted as a cover crop.

- 1a. Plants with prickles 3a. var. *diplotricha*
1b. Plants without prickles 3b. var. *inermis*

3a. *Mimosa diplotricha* var. *diplotricha*

巴西含羞草(原变种) *ba xi han xiu cao (yuan bian zhong)*

Mimosa invisa Martius (1837), not Martius ex Colla (1834).

Plants with prickles.

Cultivated or naturalized in Guangdong, Hainan, and Yunnan [native to tropical America; introduced throughout the tropics].

3b. *Mimosa diplotricha* var. *inermis* (Adelbert) Veldkamp, *Fl. Males.* Bull. 9: 416. 1987.

无刺巴西含羞草 *wu ci ba xi han xiu cao*

Mimosa invisa Martius var. *inermis* Adelbert, *Reinwardtia* 2: 359. 1953.

Plants without prickles.

Cultivated in Fujian, Guangdong, Hainan, and Yunnan [widely cultivated in tropical regions].

white, upper ones bisexual, lower ones male. Calyx campanulate, ca. 2.5 mm, 5-dentate. Petals 5, narrowly lanceolate, 3–4 mm. Stamens 10, ca. 5 mm, free. Ovary oblong, ca. 2 mm. Legume reddish brown, straight or slightly curved, linear, 4–11 × 0.2–0.4 cm. Seeds dark brown, rectangular, ca. 3 mm.

Naturalized in Guangdong, Taiwan, Yunnan [native to tropical America; widely cultivated in the tropics].

In FRPS (39: 20. 1988), the name *Desmanthus virgatus* (Linnaeus) Willdenow was misapplied to this species.

This species is planted as a cover crop.